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Mail ID: e635a1bff8a54762be4e97770934db36

From: Jetter, James

To: darwincurtis@comcast.net

Copy To: Mitchell, John; Ebersviller, Seth

Delivered Date: 12/23/2013 01:09 PM EST

Subject: RE: EPA Testing Of Solar Cookers - June 2012

Attachment: IMG_0437.jpg [3715 KB]

Dar,

We tested three solar cookers (photo attached) using the ASAE/ASABE S580 Standard. As you know, the Standard is limited to a single measure of performance – standardized cooking power. We found the parabolic-type cooker had the greatest standardized cooking power.

We found that the Standard needed some clarifications, and we submitted comments to Paul Funk on the revision of the solar cooker test method.

Seth Ebersviller, EPA Post-Doctoral Fellow, is working on a publication that includes results and discussion of the Standard and related issues.

The laboratory testing we do is mostly limited to measurements we can quantify under controlled conditions, although we report our observations, too.

We can measure and report efficiency (ratio of the energy delivered to the cooking vessel to the energy received from the sun), but efficiency may not be too important since the sun energy is “free.”

I think that additional information from field testing would be needed to answer many of your specific questions, below.

It seems to me that “integrated cooking” with a solar cooker, a retained heat cooker, and a combustion-type stove may be a great approach for appropriate applications, and it is consistent with the stove “stacking” that is already frequently found in the field.

Thank you for your interest in our work, and we will keep you informed on our progress.

Regards,
Jim

From: Darwin Curtis [mailto:darwincurtis@comcast.net]
Sent: Tuesday, December 17, 2013 11:43 AM

To: Jetter, James
Subject: EPA Testing Of Solar Cookers - June 2012

Jim
Back in April of this year, I e-mailed you asking for information on the results of testing of three solar cookers you had accomplished in June of '12. In your answer you said you had discussed the results in "general terms" at the Forum in Phnom Penh but:
"I didn't present final results for solar cookers or stoves at the Forum, because data analysis and QA reviews are not completed yet…"
As you can imagine, your conclusions from those tests in 2012 continue to be of importance to us. I have just been in touch with John Mitchell and asked him when they might be available. He indicated that the eventual publishing was still a long way off but that "Jim will give unofficial feedback and analysis to individual stove owners before then though – if asked."
We would value whatever comment you might be able to make at this time. It could well affect the direction of our R&D in the short term and our more general planning as well. For example, we would welcome your thoughts on such specifics as these:
- Practicality, efficiency, safety and durability of the equipment.
- Implications of solar thermal as the unique energy and its significance to the GACC project.
- Suggestions for improvement of equipment inspired by your testing.
- Considerations of cost of equipment and its use relative to other fuel efficient stoves.
- Since there will always be periods of overcast, your thoughts on the merits and problems of combining solar thermal equipment with stoves employing combustibles and with retained heat devices to insure frugal use of combustible fuels.
- Whatever else you might have concluded by your testing which could enlighten us.

In short, we hope to profit from your conclusions, better to serve the objectives of the GACC.
Dar
Solar Household Energy